

REMARKS

This is a full and timely response to the Office Action mailed March 17, 2009, submitted concurrently with a first month extension of time to extend the due date for response to July 17, 2009.

By this Amendment, claims 1 and 2 have been amended to address the rejection under 35 U.S.C. §112, second paragraph and to more particularly define the present invention. Thus, claims 1-15 are currently pending in this application with claims 3, 4, 6, 7, 11, and 12 being withdrawn. Support for the claim amendments can be readily found variously throughout the specification and the original claims, see, in particular, page 10, line 27, to page 11, line 1, of the specification and claim 1 of the claims.

In view of these amendments, Applicant believes that all pending claims are in condition for allowance. Reexamination and reconsideration in light of the above amendments and the following remarks is respectfully requested.

Rejection under 35 U.S.C. §112

Claims 1, 2, 5, 8-10 and 13-15 are rejected under 35 U.S.C. §112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Specifically, the Examiner believes that claim 1 lacks antecedent basis for the recitation "*the existing scribe line*." Applicant believes that the amendment to claim 1 overcomes this rejection by changing the recitation "*the existing scribe line*" to "*an existing scribe line*." Applicant believes that this amendment provides antecedent basis for the recitations of "*the existing scribe line*" in the remaining dependent claims. Thus, in view of the amendment to claim 1, withdrawal of this rejection is respectfully requested.

Rejection under 35 U.S.C. §102 and §103

Claims 2 and 13-15 are rejected under 35 U.S.C. §102(b) as allegedly being anticipated by any one of the previously cited Shimotoyodome et al. patents (U.S. Patent No. 6,460,258, U.S. Patent No. 6,470,782, and U.S. Patent No. 6,478,206, hereinafter, Shimotoyodome et al.) or, in the alternative, under 35 U.S.C. §103(a) as allegedly being obvious over any one of the

Shimotoyodome et al. patents in view of Zumstein (U.S. Patent No. 3,834,258). Applicant respectfully traverses these rejections.

To constitute anticipation of the claimed invention under U.S. practice, the prior art reference must literally or inherently teach each and every limitation of the claims. Further, to establish a *prima facie* case of obviousness, the cited reference(s) must teach or suggest the invention as a whole, including all the limitations of the claims. Here, in this case, none of the cited references, either alone or in combination, teach or suggest all of the limitations of the claims with particular emphasis on the limitations "*a travel motion control means for controlling the travel motion of said scribe means*", "*wherein said travel motion control means is programmed to comprise (1) moving the scribe means across the brittle material substrate, (2) lifting the scribe means from the brittle material substrate upon reaching said scribe stop position, (3) moving the lifted scribe means across at least one existing scribe line to said scribe start position, and (4) lowering the scribe means to the brittle material substrate at said scribe start position*" and "*wherein the scribe start position and the scribe stop position in the second direction are set at a distance of 0.5mm to 0.7mm from the scribe line of the first direction.*"

Despite the arguments set forth in Applicant's previous response, the Examiner continues to believe that Shimotoyodome et al. discloses the claimed travel control means because the moving mechanism of Shimotoyodome et al. causes vertical movement of the scribe means when the cutter is moved away from the workpiece. Hence, the Examiner argues that the moving mechanism of Shimotoyodome et al. is capable of preventing the scribe means from moving across an existing scribe line (see page 4 of the Office Action). However, Applicant respectfully disagrees with the Examiner's arguments in this regard.

Applicant still believes that the scribe apparatuses of Shimotoyodome et al. do not comprise all of the claimed structures and are not capable of producing the claimed scribe lines since Shimotoyodome et al. does not teach or suggest a travel motion control means that is specifically programmed to form the intersection between the scribe line in the second direction and the scribe line of the first direction without the scribe means being pressed against the existing scribe line in the brittle material substrate.

However, Applicant recognizes that there is no recitation of a “*programming*” requirement in the claims and that there is nothing in the apparatus claims that requires or otherwise positively connects the “*travel motion control means*” to the specific steps of allowable process claim 1. Thus, in view of the Examiner’s comments in the Office Action, Applicant has amended claim 2 to further distinguish the claimed travel motion control means from the moving mechanism of the prior art by adding a “*programming*” requirement and specifically defining *the scribe start position and the scribe stop position in the second direction being set at a distance of 0.5mm to 0.7mm from the scribe line of the first direction*. More specifically, claim 2 could be amended as follows:

2. (Currently Amended) A scribe apparatus for carrying out the scribe method according to claim 1, the scribe apparatus comprising:

a scribe means for generating a high-penetration vertical crack in the brittle material substrate by applying impacts of a short period to the point on the surface of the brittle material substrate; and

a travel motion control means for controlling the travel motion of said scribe means,

~~wherein said travel motion control means prevents said scribe means from traveling across the at least one scribe line of the first direction is programmed to comprise (1) moving the scribe means across the brittle material substrate, (2) lifting the scribe means from the brittle material substrate upon reaching said scribe stop position, (3) moving the lifted scribe means across at least one existing scribe line to said scribe start position, and (4) lowering the scribe means to the brittle material substrate at said scribe start position, and~~

wherein the scribe start position and the scribe stop position in the second direction are set at a distance of 0.5mm to 0.7mm from the scribe line of the first direction.

Applicant believes that these limitations clearly distinguish the present invention from Shimotoyodome et al. by positively connecting the “*travel motion control means*” to the specific steps of allowable claim 1.

With regard to Zumstein, Applicant submits that Zumstein does not cure the deficiencies of Shimotoyodome et al. since the cited reference teaches only the use of a computer to control cutting apparatuses but does not teach a travel motion control means programmed in the manner recited in amended claim 2 (i.e. “*lifting the scribe means . . . upon reaching said scribe stop position, and lowering the scribe means . . . at said scribe start position*”, and “*wherein the scribe*

start position and the scribe stop position in the second direction are set at a distance of 0.5mm to 0.7mm from the scribe line of the first direction"). Hence, Applicant believes that the amendments to claim 2 also distinguish the present invention from that which is disclosed in Zumstein. Further, Applicant also believes that one skilled in the art would not be motivated to modify the computer program in Zumstein to the specifically claimed scribe start position and scribe stop position of the present invention.

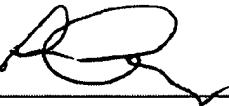
Thus, for this reasons, withdrawal of the outstanding rejection is respectfully requested.

CONCLUSION

For the foregoing reasons, all the claims now pending in the present application are believed to be clearly patentable over the outstanding rejections. Accordingly, favorable reconsideration of the claims in light of the above remarks is courteously solicited. If the Examiner has any comments or suggestions that could place this application in even better form, the Examiner is requested to telephone the undersigned attorney at the below-listed number.

Dated: July 17, 2009

Respectfully submitted,

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